

DEFECTOARRAY[®] Sensor

Segmented through-type coil



Patented sensor technology for clearance compensation

With its newly developed sensor technology, FOERSTER has successfully constructed a segmented through-type coil with high-precision defect detection for non-destructive material testing. Divided into maximally eight overlapping segments with one clearance winding each, the patented DEFECTOARRAY Sensor is capable of accurately detecting defects on eccentrically guided material. The innovative clearance compensation enables the reduction of pseudo-defects resulting in less rejection of tested pieces.

Accurate recording of defect positions

Apart from the clearance compensation, the testing with eight channels makes the defect detection on tubes and bars even more accurate. Until now, only the longitudinal position of a defect has been recorded and displayed. The new sensor now also records and displays the circumferential position of a defect. This enables the operator to quickly find the defects on the material following the testing.

Eddy current technology of tomorrow

The improved development of the sensor design comprises eight segments in a multi-differential arrangement with one clearance winding per segment. Despite its complex design, the complete sensor technology has been implemented within the known FOERSTER sizes I, II and III. It can be distinguished from the other coils on the outside only by the two connectors. The DEFECTOARRAY Sensor fits into all existing mountings and magnetizing yokes.

Convincing advantages

- Improved reproducibility of test results due to clearance compensation, reducing the number of pseudo-rejects
- Clearance compensation reduces signals resulting from dimensional deviations, and eccentricity
- Accurate recording of defect positions in longitudinal and circumferential direction
- Available in sizes I (nominal diameter 18-45 mm), II (nominal diameter 46-100 mm) and III (nominal diameter 104-180 mm)
- Change of coils and nozzles is only necessary in 3, 4 or 5 mm steps depending on the material diameter and the size
- Clearance compensation allows a lower filling factor of the coil and can increase the distance between material and sensor. This can reduce the risk of mechanical damage to both the sensor and the material
- Compatible with all existing FOERSTER mountings and magnetizing yokes

For a comprehensive consultation on the use of the DEFECTOARRAY sensors especially for your application, please contact us.

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